

ORDER FOR SUPPLIES OR SERVICES

PAGE 1 OF 10 PAGES

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER 05/20/2013		2. CONTRACT NO. (If any) EP-C-11-037		6. SHIP TO: a. NAME OF CONSIGNEE ORD/NHSRC	
3. ORDER NO. 0007		4. REQUISITION/REFERENCE NO. See Schedule			
5. ISSUING OFFICE (Address correspondence to) CPOD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Cincinnati OH 45268				b. STREET ADDRESS US Environmental Protection Agency 26 West Martin Luther King Drive	
				c. CITY Cincinnati	e. ZIP CODE 45268
7. TO: (b)(4)				f. SHIP VIA	
a. NAME OF CONTRACTOR TETRA TECH EM, INC.				8. TYPE OF ORDER	
b. COMPANY NAME				<input type="checkbox"/> a. PURCHASE <input checked="" type="checkbox"/> b. DELIVERY REFERENCE YOUR: Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.	
c. STREET ADDRESS 1881 CAMPUS COMMONS DRIVE SUITE 200 (b)(4)				Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.	
d. CITY RESTON		e. STATE VA	f. ZIP CODE 201911519		
9. ACCOUNTING AND APPROPRIATION DATA See Schedule				10. REQUISITIONING OFFICE CPOD	

11. BUSINESS CLASSIFICATION (Check appropriate box(es))				12. F.O.B. POINT Destination	
<input type="checkbox"/> a. SMALL <input checked="" type="checkbox"/> b. OTHER THAN SMALL <input type="checkbox"/> c. DISADVANTAGED <input type="checkbox"/> d. WOMEN-OWNED <input type="checkbox"/> e. HUBZone <input type="checkbox"/> f. SERVICE-DISABLED VETERAN-OWNED <input type="checkbox"/> g. WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOSB PROGRAM <input type="checkbox"/> h. EDWOSB					
13. PLACE OF a. INSPECTION Destination		b. ACCEPTANCE Destination		14. GOVERNMENT B/L NO.	
				15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date)	
				16. DISCOUNT TERMS	

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	DUNS Number: (b)(4) Adaptation of U.S. EPA Method 538 or Similar Method for the Analysis of EA2192 by Direct Aqueous Injection--LC/MS/MS TOPO: Stuart Willison Continued ...					

SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.		17(b) TOTAL (Cont. pages)
	21. MAIL INVOICE TO:						
	a. NAME RTP Finance Center						\$100,000.00
	b. STREET ADDRESS (or P.O. Box) US Environmental Protection Agency RTP-Finance Center Mail Drop D143-02 109 TW Alexander Drive						\$165,505.22
c. CITY Durham			d. STATE NC	e. ZIP CODE 27711		17(i) GRAND TOTAL	

22. UNITED STATES OF AMERICA BY (Signature)

23. NAME (Typed)
Camille W. Davis
TITLE: CONTRACTING/ORDERING OFFICER

ORDER FOR SUPPLIES OR SERVICES
SCHEDULE - CONTINUATION

PAGE NO
2

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER 05/20/2013	CONTRACT NO. EP-C-11-037	ORDER NO. 0007
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ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
0001	<p>Admin Office: CPOD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Cincinnati OH 45268 Period of Performance: 05/20/2013 to 02/28/2014</p> <p>STREAMS2 TO -Adaptation of U.S. EPA Method 538 or Similar Method for the Analysis of EA2192 by Direct Aqueous Injection-LC/MS/MS. PR-ORD-13-00537 is also associated with this package Award Type: Cost-plus-fixed-fee Total Estimated Cost: \$(b)(4) Fixed Fee: \$(b)(4) Completion Form Requisition No: PR-ORD-13-00492, PR-ORD-13-00537</p> <p>Accounting Info: 13-14-C-264R000-401F72XPC-2532--26A6A-13264RE002-001 BFY: 13 EFY: 14 Fund: C Budget Org: 264R000 Program (PRC): 401F72XPC Budget (BOC): 2532 Cost: 26A6A DCN - Line ID: 13264RE002-001 Funding Flag: Partial Funded: \$50,000.00 Accounting Info: 12-13-C-264W000-401F72-2532--26A6A-13264WE010-001 BFY: 12 EFY: 13 Fund: C Budget Org: 264W000 Program (PRC): 401F72 Budget (BOC): 2532 Cost: 26A6A DCN - Line ID: 13264WE010-001 Funding Flag: Partial Funded: \$14,649.00 Accounting Info: 13-14-C-264W000-401F72-2532--26A6A-13264WE010-002 BFY: 13 EFY: 14 Fund: C Budget Org: 264W000 Program (PRC): 401F72 Budget (BOC): 2532 Cost: 26A6A DCN - Line ID: 13264WE010-002 Funding Flag: Partial Funded: \$35,351.00</p> <p>Continued ...</p>				100,000.00	

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

\$100,000.00

ORDER FOR SUPPLIES OR SERVICES
SCHEDULE - CONTINUATION

PAGE NO
3

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER
05/20/2013

CONTRACT NO.
EP-C-11-037

ORDER NO.
0007

ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	The obligated amount of award: \$100,000.00. The total for this award is shown in box 17(i).					

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

\$0.00

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE		PAGE OF PAGES 1 5	
2. AMENDMENT/MODIFICATION NO. 001		3. EFFECTIVE DATE See Block 16C		4. REQUISITION/PURCHASE REQ. NO. PR-ORD-14-00474	
6. ISSUED BY CPD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Cincinnati OH 45268		7. ADMINISTERED BY (If other than Item 6) CODE		5. PROJECT NO. (If applicable)	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) TETRA TECH, INC. Attn: (b)(4) 1881 CAMPUS COMMONS DRIVE SUITE 200 (b)(4) RESTON VA 201911519		(x)		9A. AMENDMENT OF SOLICITATION NO.	
CODE (b)(4)		FACILITY CODE		9B. DATED (SEE ITEM 11)	
		x		10A. MODIFICATION OF CONTRACT/ORDER NO. EP-C-11-037 0007	
				10B. DATED (SEE ITEM 13) 05/20/2013	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended.
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

See Schedule

Net Increase:

\$20,000.00

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER (Specify type of modification and authority) FAR 52.242-3, Changes-Cost Reimbursement and Tetra Tech proposal dated January 29, 2014

E. IMPORTANT: Contractor ☒ is not, ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

DUNS Number: (b)(4)

The purposes of this modification are to: revise Task 3 in the PWS; extend the Period of Performance through September 30, 2014; increase the Task Order cost and fixed-fee ceilings; and add incremental funding.

TOPO: Stuart Willison

LIST OF CHANGES:

Reason for Modification : Additional Work

Period Of Performance End Date changed

From: February 28, 2014

Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Camille W. Davis	
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16C. DATE SIGNED 02/13/2014	16B. ELECTRONIC SIGNATURE Camille W. Davis

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED

EP-C-11-037/0007/001

PAGE OF

2

5

NAME OF OFFEROR OR CONTRACTOR

TETRA TECH EM, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>To: September 30, 2014</p> <p>Total Amount for this Modification: \$19,306.16</p> <p>New Total Amount for this Award: \$184,811.38</p> <p>Obligated Amount for this Modification: \$20,000.00</p> <p>Incremental Funded Amount changed From: \$100,000.00 To: \$120,000.00</p> <p>CHANGES FOR LINE ITEM NUMBER: 1 Total Amount changed from \$165,505.22 to \$184,811.38</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 13-14-C3-264R000-401F72-2532-HQ00BG00-26A6A-14264R E004-002 Beginning FiscalYear 13 Ending Fiscal Year 14 Fund (Appropriation) C3 Budget Organization 264R000 Program (PRC) 401F72 Budget (BOC) 2532 Job # (Site/Project) HQ00BG00 Cost Organization 26A6A DCN-LineID 14264RE004-002 Quantity: 0 Amount: \$20,000.00</p> <p>Incremental funding break-out: Cost: (b)(4) Fee: \$ Total: \$20,000.00</p> <p>Total incremental funding break-out is as follows: Cost: \$(b)(4) Fee: Total: \$120,000.00</p> <p>Delivery Location Code: ORD/NHSRC ORD/NHSRC US Environmental Protection Agency 26 West Martin Luther King Drive Cincinnati OH 45268 USA</p> <p>Continued ...</p>				

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED

EP-C-11-037/0007/001

PAGE OF

3

5

NAME OF OFFEROR OR CONTRACTOR

TETRA TECH EM, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center Mail Drop D143-02 109 TW Alexander Drive Durham NC 27711 FOB: Destination Period of Performance: 05/20/2013 to 09/30/2014				

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE		PAGE OF PAGES 1 2	
2. AMENDMENT/MODIFICATION NO. 002		3. EFFECTIVE DATE See Block 16C		4. REQUISITION/PURCHASE REQ. NO.	
5. PROJECT NO. (If applicable)		6. ISSUED BY CODE CPOD		7. ADMINISTERED BY (If other than Item 6) CODE	
CPOD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Cincinnati OH 45268		8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) TETRA TECH EM. INC. Attn: (b)(4) 1881 CAMPUS COMMONS DRIVE SUITE 200 (b)(4) RESTON VA 201911519 (b)(4) CODE (b)(4) FACILITY CODE		9A. AMENDMENT OF SOLICITATION NO. 9B. DATED (SEE ITEM 11) 10A. MODIFICATION OF CONTRACT/ORDER NO. EP-C-11-037 0007 10B. DATED (SEE ITEM 13) 05/20/2013	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended.
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER (Specify type of modification and authority) Mutual Agreement between the Parties and Tetra Tech's e-mail request dated August 18, 2014

E. IMPORTANT: Contractor ☒ is not, ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

DUNS Number: (b)(4)

The purpose of this modification is to extend the Period of Performance through October 31, 2014 as requested by the contractor. This is a No Cost extension to allow additional time to complete the final deliverable.

TOPO: Stuart Willison

LIST OF CHANGES:

Reason for Modification : Other Administrative Action

Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Camille W. Davis	
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16C. DATE SIGNED 09/05/2014	16B. ELECTRONIC SIGNATURE Camille W. Davis

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED

EP-C-11-037/0007/002

PAGE OF

2

2

NAME OF OFFEROR OR CONTRACTOR

TETRA TECH EM, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Period of Performance End Date changed From: September 30, 2014 To: October 31, 2014</p> <p>Delivery Location Code: ORD/NHSRC ORD/NHSRC US Environmental Protection Agency 26 West Martin Luther King Drive Cincinnati OH 45268 USA</p> <p>Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center Mail Drop D143-02 109 TW Alexander Drive Durham NC 27711</p> <p>FOB: Destination Period of Performance: 05/20/2013 to 10/31/2014</p>				

PERFORMANCE WORK STATEMENT STREAMS II

Task Order 0007, Tetra Tech EP-C-11-037

TITLE: Adaptation of U.S. EPA Method 538 or Similar Method for the Analysis of EA2192 by Direct Aqueous Injection-LC/MS/MS

Task Order Manager (TOM)	Alternate Task Order Manager (ATOM)
Name: Stuart Willison	Name: Matthew Magnuson
Office: ORD/NHSRC	Office: ORD/NHSRC
26 W. Martin Luther King Drive, MS489	26 W. Martin Luther King Drive, MS489
Cincinnati, OH 45268	Cincinnati, OH 45268
Phone: (513) 569-7253	Phone: (513) 569-7321
Fax: (513) 487-2555	Fax: (513) 487-2555
Email: Willison.Stuart@epa.gov	Email: Magnuson.Matthew@epa.gov

PERIOD OF PERFORMANCE: Date of Task Order Award through December 31, 2013

BACKGROUND

In 2004, the Environmental Protection Agency (EPA) National Homeland Security Research Center (NHSRC), in collaboration with experts from across the EPA and other federal agencies, identified analytical methods that could potentially be used for the analysis of contaminants in response to a homeland security incident. Summaries of these methods are provided in EPA's Standardized Analytical Methods for Environmental Restoration Following Homeland Security Events (SAM). One major class of potential chemical warfare agents of concern to the EPA is organophosphorous nerve agents (OPNAs). These agents include, but are not limited to, V-series agents such as VX and G-series agents including soman (GD) tabun (GA) and sarin (GB). These nerve agents are toxic compounds that covalently bind to a reactive serine residue in the active site of cholinesterase enzymes including acetylcholinesterase (AChE) and butyrylcholinesterase (BuChE) leading to rapid muscle twitching, seizures, and potential death when consumed or exposed to skin. While the G-series agents hydrolyze rapidly in the environment, the V-series agents are persistent and remain a health hazard long after they are released. The careful monitoring of nerve agent contaminants and their degradation products in the environment is thus a very important task in ensuring the safety of the population. EA2192 is an example of an organophosphorus nerve agent degradation product, which is just as toxic as its parent compound but environmentally persistent.

The purpose of the project is to evaluate U.S. EPA's method 538, with the possibility of further method development if needed, for assessing exposure to nerve agents by analyzing EA2192, a degradation product of VA, in drinking water matrices by LC-MS/MS analysis. Because of the similarities in sample preparation and analysis that Method 538 uses for nonvolatile chemicals, this method may also be applicable or adaptable to CWAs and their degradation products in the intended environmental matrix. By adapting the EPA 538 method for CWA degradation products, gaps in capability can be addressed. By having an already rigorous method in place for

non-volatiles in drinking water, where many labs have the experience and capability to run the specific method, increasing the number of laboratories capable of carrying out these methods will serve to significantly increase the surge laboratory capacity to address these threats in the event of a large exposure. It should be noted that even if the labs do have experience with EPA method 538, EA2192 is a highly toxic chemical that will require a lab with the appropriate health and safety plan to handle such dangers. The approach desired for this performance work statement (PWS) is to start with an already proven method for nonvolatile chemicals in drinking water, using high performance liquid chromatography coupled to tandem mass spectrometry LC-MS/MS, and adapting it to a similar nonvolatile chemical, EA2192. It is possible that the contractor have a method similar to EPA Method 538 which they currently use for EA2192 analysis. Such a method might also be an appropriate starting point for the tasks described below. Contractors should include this method along with supporting performance and QA/QC data along with their proposal. Supporting information includes data generated in other aqueous matrices other than drinking water, such as surface water, leachate, decontamination solutions, etc.

TASKS

NOTE: Separate cost estimates for each task should be submitted. Specific tasks listed below, or combinations thereof, will be performed based on availability of funds.

Task 1: Preparation of the Quality Assurance Project Plan and Health and Safety Plan

The contractor shall prepare (or modify the attached version) a Quality Assurance Project Plan (QAPP) that describes in detail the methods to be employed under Tasks 2 and 3. The QAPP shall comply with the applicable portions of the following National Homeland Security Research Center (NHSRC) quality assurance (QA) guidelines:

1. NHSRC Quality Management Plan (QMP)
2. NHSRC Quality Assurance Project Plan (QAPP) Requirements

The QAPP will document all aspects of the project, including experimental design and may use existing QAPP references as guidance, if applicable.

The QAPP will be prepared in accordance with QAPP requirements, <http://www.epa.gov/quality/qs-docs/r5-final.pdf>, based on the type of research being conducted.

The QAPP will document all required quality control parameters, including the required sample frequencies and performance criteria, in order to meet the EPA's data quality objectives. Some of the performance criteria investigated using the approach described in Method 538 include (but are not limited to):

- Preservative selection
- Water selection

- Initial demonstration of capability
- Initial demonstration of low system background
- Initial demonstration of precision and accuracy
- Minimum reporting level
- Calibration confirmation and quality control samples
- Detection limit determination
- On-going QC requirements, including blanks, calibration checks, internal standards, etc.

The contractor shall include in the QAPP the handling and transferring of data to the EPA regarding sample preparation and consistency for each set of experimental conditions listed within the monthly reports in addition to written final reports for each Task completion.

The QAPP will need to be updated, as required, between each of the task stages described.

A sample QAPP will be provided that vendors can follow and/or edit (See Attachment).

Task 1 Deliverable: Draft QAPP within 15 days after task order award. EPA will review the draft document within 30 days after receipt and will provide comments that will need to be addressed. Final QAPP document will be due 10 days following receipt of EPA comments.

Task 2: Evaluation of EPA Method 538 or Similar Method for EA2192 LC-MS Analysis

The contractor shall prepare samples under controlled conditions listed above under Task 1. Samples will be derived from reagent water. The contractor shall provide data regarding sample preparation and consistency for each set of experimental conditions as documented in the QAPP. The contractor will perform necessary experiments and generate a report documenting all of the required performance and quality assurance/quality control criteria and parameters discussed in Task 1 and will provide a written report of the data within Task 2.

To accomplish this, the following will be performed:

- A) Select preservatives, to be approved by EPA, are to be used for reagent water samples using Method 538, or alternate method approved by EPA. Feedback regarding EPA approval of preservatives and alternate methods will be provided within one (1) week after proposal;
- B) Sample preparatory method development, if needed, including sample collection, preservation and storage (provided that Method 538 does not satisfy the necessary preparatory steps needed for EA2192);
- C) Perform an initial demonstration of capability (IDC) for EA2192 via LC-MS/MS analysis using the settings described within Task 1 for proposed method; and
- D) Repeat if necessary, if the desired results are not obtained (subject to cost and EPA authorization). Modifications may be made to the method if approved by EPA.

Task 2 Deliverable: Draft report due within 30 days after completion of Task 2 to include all of the experiments that were attempted and all of the data that was collected in a reportable format.

EPA will review the draft document within 30 days after receipt and will provide comments that will need to be addressed. Final report will be due 10 days following receipt of EPA comments.

Task 3 (OPTIONAL): Sample Analysis of Different Drinking Waters

NOTE: This task will only be ordered after completion of Task 2

The contractor shall use the approved method from Task 2 to conduct analyses for several drinking water samples (up to five (5) waters provided and specified by EPA). A cost estimate must be provided by the contractor for the analysis of each water matrix, with a minimum of three (3) and up to a possible five (5), reported water matrices.

To accomplish this, the following will be performed with the approved method:

- A) Determine the holding time of EA2192 in the presence of the preservatives used in Task 2, using the sample collection vessels, preservation procedure, and sample preparation approach used in the approved method. Holding time parameters can be found within the approved QAPP.
- B) Characterize performance of method for up to five (5) different water samples selected by EPA.

Task 3 Deliverable: The Draft report is due within 30 days after completion of Task 3, to include all of the experiments that were attempted and all of the data collected in a reportable format. EPA will review the draft document within 30 days after receipt and will provide comments that will need to be addressed. Final report will be due 10 days following receipt of EPA comments.

Task 4 (OPTIONAL): Modifications for Method Improvement

Repeat any steps in Task 2 or 3 that are deemed necessary to improve the performance of the approved method as written or modified (subject to cost and EPA approval).

Task 4 Deliverable: Draft report is due within 30 days after completion of Task 3, to include all of the experiments that were attempted and all of the data collected in a reportable format. EPA will review the draft document within 30 days of receipt and will provide comments that will need to be addressed. Final report will be due 10 days following receipt of EPA comments.

Task 5: Final Report

The contractor shall prepare documents describing the experimental methodology, data, findings, and conclusions/recommendations. These documents should include papers that can be submitted to relevant technical journals for peer-review and publication, and/or as stand-alone

documents in addition to the reports generated within each task. The document type will be determined in consultation with EPA and will depend on the results.

The contractor shall provide computerized versions of all data, statistical evaluations and associated computer code, and other materials generated for this project as well as detailed description of these materials or instructions for their use.

The contractor shall maintain records of all sample preparation events. These records shall be provided to the EPA Task Order Manager within 30 days following conduct of the event.

SSHEDULE OF DELIVERABLES

Task 1 – Prepare QAPP within 15 days after task order award. EPA approval will occur within 10 working days, if further edits are not needed.

Task 2 – Prepare reagent water samples with the selected preservatives, develop sample preparatory methods, if necessary, and initial demonstration of capability with 45 days of QAPP approval.

Task 3 – (OPTIONAL TASK) Water samples (up to 5 different waters) shall be analyzed within 60 days of preparation.

Task 4 – (OPTIONAL TASK) Draft report is due within 30 days of completion of Task 2 or Task 3 to include all of the experiments that were attempted and all of the data that was collected in a reportable format. EPA will review the draft document within 30 days after receipt and will provide comments that will need to be addressed. Final report will be due 10 days following receipt of EPA comments.

Task 5 - Data deliverables and reports shall be provided within 60 days of sample analysis. EPA shall review the report within 30 days, and the contractor shall provide a final document within 30 days of receipt of EPA comments.